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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,433	09/04/2002	Abraham Kogan	KOGAN=4	3630

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EXAMINER

COCKS, JOSIAH C

ART UNIT PAPER NUMBER

3749

DATE MAILED: 02/04/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/049,433

Applicant(s)

KOGAN ET AL.

Examiner

Josiah C. Cocks

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2002.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 18-38 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 18-36 and 38 is/are rejected.  
7) ☒ Claim(s) 37 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 04 September 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Response to Amendment*

1. The preliminary amendment filed 6/24/02 was received and has been entered.

### *Drawings*

2. The drawings filed with the application on 9/4/02 are accepted by the examiner.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 18-36 and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 96/25633 (cited by applicant) (hereinafter “the ‘633 patent”) in view of *Blake et al.* (US # 3,927,659).

The ‘633 patent discloses in Figures 1-6 a method of protecting a surface and a reaction chamber associated with a solar radiation concentrator similar to that described in applicant’s claims 18-36 and 38 including a longitudinal axis with a surface (6) in the form of a transparent window adapted for admitting incident solar radiation, wherein a primary flow of reactants are introduced through injection device/ingress (26) to produce a whirling flow (see Fig. 2), flowing away from surface (6), and are withdraw at an opposite end through egress (31). The examiner

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considers that the whirling flow produced by injection device (26) approximates a free vortex flow. A secondary protecting flow of air is introduced at the periphery of window (6) through pipes/ingress (33) wherein this flow functions to sweep the window in order to both cool and clean it (see page 9, lines 6-13). As far as is proper, the examiner considers that as the secondary flow is admitted to chamber (24) separately from the primary flow, the secondary flow is considered free of any reactants of the primary flow.

In regard to claims 19, 27, 28, and 38, the '633 reference does not explicitly recite the flow rates of the primary and secondary flows or that the flow rate of the secondary flow is less than the flow rate of the primary flow. However, as the purpose of the flow of air through pipes (33) is identical to the purpose of applicant's secondary flow, i.e. cooling the surface, the examiner considers that selecting the flow rate of the secondary flow to be less than the flow rate of the primary flow would be simply a matter of optimizing the flow rates. This optimization would be obtainable through routine experimentation and is not regarded to be patentably distinct. (See MPEP §2144.05 (II)(A)).

In regard to claim 30, while the egress opening of the '633 patent is shown on one side of the longitudinal axis (see Fig. 1), the examiner considers that to have located the egress opening about the longitudinal axis would be simply a matter of design choice and is not regarded as patentably distinct absent the showing of some new or unexpected results over the prior art of record.

The '633 patent does not disclose that the longitudinal axis is transverse to the surface (6) because the surface is represented as a frusto-conical surface and not a flat surface. The '633

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patent also does not disclose that the reaction chamber is shaped to approximate a black body radiation cavity.

*Blake et al.* teaches a reaction chamber associated with a solar radiation concentrator in the same field of endeavor as the '633 patent wherein the chamber (22) of *Blake et al.* includes a window (46) for allowing the passage of solar radiation to the chamber may be configured to be flat (see Fig. 1) causing a longitudinal axis to be transverse to the window surface. *Blake et al.* also notes that it is desirable to cool this window (see col. 2, lines 19-20). *Blake et al.* further shows that the reaction chamber (22) approximates a black body radiation cavity (see Fig. 1).

Therefore, in regard to claims 18-36 and 38, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the reaction chamber and method of the '633 patent; to incorporate the flat window shape of *Blake et al.* as this arrangement desirably provides a window that sealably overlies the aperture of a reaction chamber enclosure and aids in preventing thermal loss (see *Blake et al.*, col. 2, lines 13-20 and col. 4, lines 65-68), and to incorporate the cavity shape approximating a black body radiation cavity as taught in *Blake et al.* as this shape maximizes effective surface area of the chamber (see *Blake et al.*, col. 2, lines 32-38)

#### ***Allowable Subject Matter***

5. Claim 37 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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***Conclusion***


6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. *Mailey, Karino, Percival et al., Buck, and Kribus et al.* are included to further show the state of the art concerning reaction chamber methods and structure.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Josiah Cocks whose telephone number is (703) 305-0450. The examiner can normally be reached on weekdays from 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira Lazarus, can be reached at (703) 308-1935. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

jcc  
January 29, 2004

  
JOSIAH COCKS  
PATENT EXAMINER  
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